

Key messages

- Sex workers in Belgium are at increased risk for abnormal cervical smears and HPV in comparison with the general population.
- Cervical cancer screening should start at the onset of sex work, irrespective of age.

in sex workers supports a higher screening frequency for this group—for example, once a year.

We recommend the use of targeted services to implement cervical screening in the sex worker community. In the case of hepatitis B vaccination, targeted services have proved to reach sex workers better than regular health services.¹²

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CONTRIBUTORS

RM is the principal investigator, LVR and CC performed and interpreted the tests, and were involved in the redaction of the article.

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REFERENCES

- 1 Walboomers JM, Jacobs MV, Manos MM, *et al*. Human papillomavirus is a necessary cause of invasive cervical cancer worldwide. *J Pathol* 1999;189:12–19.
- 2 Gitsch G, Kainz Ch, Reinthaller A, *et al*. Cervical neoplasia and human papilloma virus infection in prostitutes. *Genitourin Med* 1991;67:478–80.
- 3 Linos A, Riza E. Comparisons of cervical cancer screening programmes in the European Union. *Eur J Cancer* 2000;36:2260–65.
- 4 Arbyn M, Van Oyen H. Cervical cancer screening in Belgium. *Eur J Cancer* 2000;36:2191–97.
- 5 Report of the 1991 Bethesda Workshop. The 1991 Bethesda system for reporting cervical/vaginal cytological diagnoses. *JAMA* 1992;267:1892.
- 6 Kleter B, van Doorn LJ, Schrauwen L, *et al*. Development and clinical evaluation of a highly sensitive PCR-reverse hybridization line probe assay for detection and identification of anogenital human papillomavirus. *J Clin Microbiol* 1999;37:2508–17.
- 7 McDonnell R, McDonnell P, O'Neill M, *et al*. Health risk profile of prostitutes in Dublin. *Int J STD AIDS* 1998;9:485–88.
- 8 Hutchinson ML, Zahniser DJ, Sherman ME, *et al*. Utility of liquid-based cytology for cervical cancer screening: results of a population-based study conducted in a high cervical cancer incidence region of Costa Rica. *Cancer Cytopathol* 1999;87:48–55.
- 9 Chan R, Khoo L, Ho TH, *et al*. A comparative study of cervical cytology, colposcopy and PCR for HPV in female sex workers in Singapore. *Int J STD AIDS* 2001;12:159–63.
- 10 Juarez-Figueroa LA, Wheeler CM, Uribe-Salas FJ, *et al*. Human papillomavirus. A highly prevalent sexually transmitted disease agent among female sex workers from Mexico City. *Sex Transm Dis* 2001;28:125–30.
- 11 Langley C, Benga-De E, Critchlow C, *et al*. HIV-1, HIV-2, human papillomavirus infection and cervical neoplasia in high-risk African women. *AIDS* 1996;10:413–17.
- 12 Mak R, Traen A, Claeysens M, *et al*. Hepatitis B vaccination for sex workers: do outreach programmes perform better? *Sex Transm Infect* 2003;79:157–9.

ECHO.....

Multiple high risk HPV infections and cervical screening



Please visit the Sexually Transmitted Infections website [www.stijournal.com] for a link to the full text of this article.

Twenty per cent of cytology samples from routine cervical screening clinics in Edinburgh, UK, were found to be positive for human papillomavirus (HPV). Multiple high risk HPV (HR-HPV) infections were most prevalent in young women, who usually have higher levels of sexual activity, and in around 40% of samples with all grades of dyskaryosis.

The addition of HR-HPV testing to cervical screening programmes may enhance the programmes' accuracy by identifying those individuals at greater risk of disease progression. This study showed that the detection of multiple HR-HPV was not a significantly better predictor of high grade cervical neoplasia being no more frequent in high grade than low grade dyskaryosis. The finding probably reflects the common sexual transmission of multiple HR-HPV types together.

Participating clinics in Edinburgh used a liquid based cytology method which has the advantage that the residual suspension not used for cytology can be used for microbiological testing. The extent of multiple infection was assessed in residual material from 3444 liquid based cytology samples using real time GP5+/GP6+ polymerase chain reaction for screening, and linear array assay for genotyping.

Future prospective cohort studies that link sequential loss or gain of HPV types with cytological analysis will be able to assess the impact of multiple HR-HPV infections on neoplastic progression.

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